

Serial No.: New – PCT/JP2004/001148 Nat'l Phase
Filed: Herewith

AMENDMENTS TO THE TITLE:

Please replace the title at page 1, line 2 with the following rewritten version:

Refrigerant Pipe Washing Method, Air Conditioner ~~Replacement~~ Updating Method,
and Air Conditioner

AMENDMENTS TO THE SPECIFICATION:

Please replace the heading at page 4, line 1 with the following rewritten version:

Summary Disclosure of the Invention

Please replace the paragraph beginning at page 4, line 7 with the following rewritten version:

According to a first aspect of the present invention, ~~The refrigerant pipe washing method described in claim 1~~ is a refrigerant pipe washing method is proposed for when an air conditioner that used a mineral-oil-based refrigerant oil is updated to or replaced with an air conditioner using an HFC refrigerant as the working refrigerant and the existing refrigerant piping is to be reused as is. ~~The, wherein the~~ residual refrigerant oil in the refrigerant piping is removed by washing the refrigerant piping using a cleaning agent comprising an HFC refrigerant containing at least 40 wt% of R32.

Please replace the paragraph beginning at page 5, line 7 with the following rewritten version:

According to a second aspect of the present invention, ~~the Claim 2 describes a~~ refrigerant pipe washing method of the first aspect of the present invention is provided such that in accordance with claim 1, ~~wherein~~ the cleaning agent is in a wet state and the refrigerant piping is washed by flushing it with the cleaning agent.

Please replace the paragraph beginning at page 4, line 16 with the following rewritten version:

According to a third aspect of the present invention, the Claim 3 describes a
refrigerant pipe washing method of the first or second aspects of the present invention is
provided such that in accordance with claim 1 or 2, wherein the cleaning agent does not
contain any R134a.

Please replace the paragraph beginning at page 4, line 23 with the following rewritten version:

According to a fourth aspect of the present invention, the Claim 4 describes a
refrigerant pipe washing method of any one of the first to fourth aspects of the present
invention is provided such that in accordance with any one of claims 1 to 3, wherein the
cleaning agent contains only components that are contained in the working refrigerant that
will be used when the air conditioner update is complete.

Please replace the paragraph beginning at page 6, line 5 with the following rewritten version:

According to a fifth aspect of the present invention, The air conditioner updating
method described in claim 5 is an air conditioner updating method is proposed whereby at
least a portion of the equipment constituting an existing air conditioner is updated or replaced
while the refrigerant piping of the existing air conditioner, i.e., the existing refrigerant piping,
is reused as is, the method including the following steps: a refrigerant recovery step, an
equipment updating step, a refrigerant charging step, and a pipe washing step. In the
refrigerant recovery step, the working refrigerant containing the existing refrigerant oil, i.e., a

mineral-oil-based refrigerant oil, is recovered from the existing air conditioner. In the equipment updating step, at least a portion of the equipment constituting the existing air conditioner is updated or replaced. In the refrigerant charging step, the air conditioner with the equipment replaced is charged with a working refrigerant comprising an HFC refrigerant containing at least 40 wt% of R32. In the pipe washing step, the working refrigerant charged in the refrigerant charging step is circulated and existing refrigerant oil remaining in the existing refrigerant piping is carried along with the working refrigerant. The existing refrigerant oil is then separated from the working refrigerant in order to remove it from the existing refrigerant piping.

Please replace the paragraph beginning at page 7, line 1 with the following rewritten version:

According to a sixth aspect of the present invention, the Claim 6 describes an air conditioner updating method of the fifth aspect of the present invention is provided such that
~~in accordance with claim 5, wherein~~ during the pipe washing step, the working refrigerant is circulated in such a manner that working refrigerant in a wet state flows through the existing refrigerant piping.

Please replace the paragraph beginning at page 7, line 11 with the following rewritten version:

According to a seventh aspect of the present invention, The air conditioner described
~~in claim 7 is an air conditioner~~ is provided that is obtained by updating or replacing at least a portion of the equipment of an existing air conditioner and changing the working refrigerant

to an HFC refrigerant, the air conditioner comprises, ~~the air conditioner comprising the following:~~ existing refrigerant piping, a heat source unit, a user unit, and an oil collecting device. The existing refrigerant piping was used with the existing air conditioner and contains residue of the existing refrigerant oil, i.e., a mineral-oil-based refrigerant oil. The heat source unit and user unit are connected together by the existing refrigerant piping. The oil collecting device is configured such that after the working refrigerant has been changed and before the air conditioner is run in a normal operating mode, the oil collecting device can draw in working refrigerant that is being circulated through the air conditioner and separate the existing refrigerant oil that is carried with the working refrigerant. The replaced working refrigerant is an HFC refrigerant containing at least 40 wt% of R32.

Please replace the heading at page 8, line 16, with the following rewritten version:

Detailed Description of the Preferred-Embodiments of the Invention

Please replace the heading at page 24, line 1, with the following rewritten version:

WHAT IS CLAIMED IS: ~~Claims~~